

### **WHAT IS CLAIMED IS:**

1. A shank for a rotary and/or percussive tool, comprising at least two, axially spaced, guide regions (1a, 1b); at least one radially projecting entrain strip (2); and at least one locking groove (3) arranged between the at least two guide regions (1a, 1b) and axially closed at opposite ends thereof for receiving at least one radially displaceable and axially displaceable, within predetermined limits, locking member (4) of chuck,

wherein at least one of the at least two guide regions (1a, 1b) has a guide dimension (F), and an axial region (A) of the locking groove (3) has a cross-sectional width (B) that includes a radial extent of the entrain strip (2), and a thickness (D) measured in a direction transverse to the width measurement direction, and

wherein the guide dimension (F) is greater than the thickness (A) but smaller than the width (B).

2. A shank according to claim 1, wherein the axial region (A) of the locking groove (3) and at least one of the guide regions (1a, 1b) have a substantially same cross-sectional surface within a tolerance range of  $\pm 10\%$ .

3. A shank according to claim 1, wherein at least one of the opposite ends of the at least one groove (3) has one of spherical and cylindrical axial stop surface (6) engageable by the locking member (4) having, respectively, a shape of one of sphere and roll.

4. A shank according to claim 1, wherein a maximum aperture angle ( $\alpha$ ) of a bottom surface of the locking groove (3), which is defined by a cross-section of the axial region (A) of the locking groove (3), amounts to at least  $120^\circ$ .

5. A shank according to claim 1, further comprising a second, radially projecting, entrain strip (2) located diametrically opposite the at least one entrain strip,

wherein a bottom surface of the at least one locking groove (3), which is located between the at least one and second entrain strips (2), forms a first

functional surface (7a, 7b) formed of smooth surface sections which are one of smoothly pass into each other and form a sharp edge, with a transition region being curved in a direction to a tool axis.

6. A shank according to claim 5, wherein the functional surface-forming surface sections are even.

7. A shank according to claim 5, further comprising a second locking groove arranged diametrically opposite the at least one locking groove, with a bottom surface of the second groove, which is located between the at least one and second entrain strips, forming a second functional surface (7a, 7b) located opposite the first functional surface.

8. A shank according to claim 1, wherein the at least one guide region (1a, 1b) has a cylindrical outer surface.

9. A shank according to claim 1, wherein a second entrain strip (2), which is arranged diametrically opposite the at least one entrain strip, is provided in the axial region (A) of the at least one locking groove.

10. A shank according to claim 1, further comprising a second locking groove (3) arranged diametrically opposite the at least one locking groove and having a same shape.

11. A shank according to claim 10, further comprising a second entrain strip arranged diametrically opposite the at least one entrain strip in the axial region (A) of the locking grooves.

12. A shank according to claim 1, wherein at the guide dimension (F) of the guide region (1a, 1b), the width (B) is equal to about 1.2-1.4 of the guide dimension (F), and the thickness (D) is equal to about .6-.8 of the guide dimension (F).

13. A shank according to claim 1, comprising further axial regions axially spaced from each other and arranged with respect to each other one of parallel, crosswise, and at an acute angle ( $\beta$ ).

14. A shank according to claim 13, further comprising a third guide region (1c) arranged between the axial regions (A, A<sup>1</sup>).

15. A shank according to claim 14, further comprising a further, segment-shaped guide region (1d) provided between the locking grooves (3) and the entrain strips (2).

16. A tool set, comprising a first tool having a shank having at least two, axially spaced, guide regions, at least one radially projecting entrain strip (2), and at least one locking groove (3) arranged between the at least two guide regions (1a, 1b) and axially closed at opposite ends thereof for receiving at least one radially displaceable and axially displaceable, within predetermined limits, locking member (4) of chuck, with at least one of the at least two guide regions (1a, 1b) having a guide dimension (F), and an axial region (A) of the locking groove (3) having a cross-sectional width (B) that includes a radial extent of the entrain strip (2), and a thickness (D) measured in a direction transverse to width measurement direction, and with the guide dimension (F) being greater than the thickness (D) but smaller than the width (B); and a second tool having a similar shank,



wherein the axial region (A) of the shank of the first tool has a thickness/width ratio greater than a thickness/width ratio of the axial region (A) of the shank of the second tool.

17. A chuck for receiving a shank of a tool and having at least two, axially spaced, guide regions (1a, 1b), at least one radially projecting entrain strip (2); and at least one locking groove (3) arranged between the at least two guide regions (1a, 1b) and axially closed at opposite ends thereof for receiving at least one radially displaceable and axially displaceable, within predetermined limits, locking member (4) of chuck, with at least one of the at least two guide regions (1a, 1b) having a guide dimension (F), and an axial region (A) of the locking groove (3) has a cross-sectional width (B) that includes a radial extent of the entrain strip (2) and a thickness (D) measured in a direction transverse to width measurement direction, and with the guide dimension (F) being greater than the thickness (D) but smaller than the width (B), the chuck comprising two axially spaced inner guide surfaces cooperation with respective guide regions of the shank; at least one locking member (4) radially displaceable over a distance smaller than a half ( $F/2$ ) of the guide dimension (F) of the guide region of the

shank; and at least one rotation-transmitting element (5) circumferentially offset relative to the locking member (4) and having a radial extent, with respect to a tool axis (L) greater than a half ( $F/2$ ) of the guide dimension (F).